



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,759	09/10/2001	Susan Joy Cooper	JMYT-239US	9843

23122 7590 06/18/2003

RATNERPRESTIA
P O BOX 980
VALLEY FORGE, PA 19482-0980

EXAMINER

DOVE, TRACY MAE

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/857,759

Applicant(s)

COOPER ET AL.

Examiner

Tracy Dove

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-7, 9-12, 14 and 17, 18 is/are rejected.
- 7) ☐ Claim(s) 8, 13 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 1745

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 9/10/01 has been considered by the examiner.

Claim Objections

Claims 1-4, 10, 12 and 18 are objected to because of the following informalities: each claim recites improper Markush group language. For example, in claims 1, 10, 12 and 18, "selected from the group" should be amended to recite "selected from the group *consisting of*". In claims 2 and 4 "selected from" should be amended to recite "selected from *the group consisting of*". In claim 3 "selected from" should be deleted. See MPEP 2173.05. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites "wherein the first catalytic component is selected from: Pt/Mo, Pt/Mo/Co, Pt/W/Co, Pt/Ru/WO₃ and Pt/Ti/W". However, Co, Ru and Ti are not possible metals for "Y" in claim 1 (from which claim 4 depends).

Claim 11 provides for the use of an electrode structure, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is

Art Unit: 1745

intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 11 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 9-12, 14, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Gunner et al., EP 838 872 A2.

Gunner teaches an electrode comprising a catalyst comprising a Pt-M alloy wherein M is selected from Ru, Rh, Ti, Cr, Mn, Fe, Co, Ni, Cu, Ga, Zr, Hf and Sn, preferably Ru, Mn Co, Ni, Rh (abstract and page 3, lines 53-56). The catalyst further comprises component Y wherein Y is preferably Mo or W or an oxide thereof (page 3, line 57-page 4, line1). The Pt-M alloy and component Y are in intimate or physical contact (page 3, lines 51-52). The catalyst may be used in the preparation of an electrode for a fuel cell, such as a phosphoric acid or solid polymer fuel cell (page 4, lines 10-27). The catalyst is used for gas diffusion electrode for fuel cells,

Art Unit: 1745

particularly for proton exchange membrane fuel cells (page 2, lines 1-2). The catalyst may be used as a poison tolerant catalyst for use in a fuel cell.

Specifically, the second catalytic component of at least claim 1 is disclosed by Gunner as a Pt-M alloy wherein M is selected from Ru, Rh, Ti, Cr, Mn, Fe, Co, Ni, Cu, Ga, Zr, Hf and Sn, preferably Ru, Mn Co, Ni, Rh. Gunner teaches the Pt-M component and the Y component may be unalloyed, but in physical contact. Thus when the Y component contacts the Pt-M component, the Y component contacts Pt and thus Gunner teaches the first catalytic component Pt-Y. Note the claims are read in light of the specification and the specification teaches Pt-Y may be a physical mixture (page 9, lines 23-24). A fourth embodiment of Gunner teaches a Pt-Ru alloy in intimate contact with Y (page 4, lines 8-9).

Thus the claims are anticipated.

Allowable Subject Matter

Claims 8, 13 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the claims are directed toward the first and second catalytic components of instant claim 1 wherein the two catalyst materials are contained in two separate layers. Specifically, the first catalytic component is contained in a separate layer from the second catalytic component.

The prior art does not teach the first and second catalytic components of claim 1 contained in two separate layers. Gunner (EP 838872) teaches the catalytic components are in intimate contact, but does not teach or suggest the first catalytic component is contained in a

Art Unit: 1745

separate layer from the second catalytic component. Wilkinson (EP 736921) teaches first and second catalytic components that may be contained in a single mixed layer or a combination of a separate layer and a single mixed layer. However, Wilkinson does not teach the first catalytic component of the claimed invention.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Adzic 6,183,894 teaches a catalyst material for an electrode of a fuel cell. Cavalca 6,287,717 teaches catalytically active materials in col. 6, lines 42-52 and col. 8, lines 22-36.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracy Dove whose telephone number is (703) 308-8821. The Examiner may normally be reached Monday-Thursday (9:00 AM-7:30 PM). My supervisor is Pat Ryan, who can be reached at (703) 308-2383. The Art Unit receptionist can be reached at (703) 308-0661 and the official fax numbers are 703-872-9310 (after non-final) and 703-872-9311 (after final).

June 12, 2003


Patrick Ryan
Supervisory Patent Examiner
Technology Center 1700